

We claim:

1. A game device which makes a work memory read from the storage means, prior to image processing, background data required in games for displaying a moving object within a virtual three-dimensional space together with the background, comprising:

pre-reading means for pre-reading said background data from said storage means using a reference line set at a distant position in a specified distance away from the limit line of the visual field direction of display.

2. A game device according to Claim 1, wherein said storage means stores said background data by dividing it into a plurality of areas in advance; and

said pre-reading means comprises judging means for judging on which of said areas said reference line is crossing, and reading means for reading in said work memory the background data of the area judged as being crossed with said reference line by this judging means.

3. A game device according to Claim 2, wherein said plurality of areas are respectively stored in said storage means by dividing the content of background data per type and approximately the same size, and said work memory comprises a plurality of memory blocks set at the same memory capacity,

and wherein said reading means is for storing background data of said respective areas in said memory blocks of more than "n" blocks (positive integral number) in accordance with the amount of its data.

4. A game device according to Claim 3, wherein said reading means includes means for judging whether said work memory block

is a vacant space or not; and means for successively storing background data per said area in more than "n" said memory blocks when said work memory block is recognized as a vacant space by this judgment.

5. A game device according to Claim 4, comprising counting means for detecting whether said moving object exists within said respective areas equivalent to memory blocks storing background data of said work memory, or whether an area exists within the visual field, and counting said moving object or area periodically,

wherein said reading means includes means for determining the memory block to store said background data based on the count value corresponding to each of said memory blocks by said counter means when it is judged that there is no vacant space in said memory block.

6. A game device according to Claim 4, wherein said reading means includes determining means for determining a plurality of consecutive memory blocks when background data to be stored requires a plurality of memory blocks.

7. A game device according to Claim 5, wherein said determining means is for determining said plurality of consecutive memory blocks representing the highest or lowest value by comparing said count values of said plurality of consecutive memory blocks.

8. A game device according to Claim 5, wherein said determining means is for determining said plurality of consecutive memory blocks representing the highest or lowest value by operating the average values for said plurality of consecutive memory blocks.

9. A game device according to any one of Claims 1 through 8, wherein said moving object is a vehicle that moves within said virtual three-dimensional space.

10. A game device according to any one of Claims 1 through 9, wherein said background data is landform data prepared to enable said vehicle to travel in arbitrary directions on the land represented by the background data.

11. A data processing method of a game device which makes to read background data required for a game that displays a moving object within virtual three-dimensional space together with background in working memory from memorizing means prior to image processing, wherein said background data is pre-read from said recording medium using reference line set at further point in the specified distance ahead of the limiting line in said displayed direction of sight.

12. Information recording medium having recorded therein said background data and programs for executing the respective means according to Claims 1 through 10.